

WHAT IS CLAIMED IS:

Sub D'
✓

1. A semiconductor device comprising:

a plurality of wiring films formed on a front surface of a base comprising an insulating resin and having electrode-forming holes, the surfaces of the wiring films and the surface of the base being positioned on the same plane and at least parts of the wiring films overlapping with the electrode-forming holes;

a conductive material embedded into the electrode-forming holes to form external electrodes on the back surface, away from the wiring films, of the base;

a semiconductor element positioned on said front surface of the base with an insulating film therebetween, the back surface of the semiconductor element being bonded to said front surface of the base; and

wires for bonding the electrodes of the semiconductor element to the corresponding wiring films.

2. A semiconductor device according to claim 1, wherein said semiconductor element and said wires are sealed with a resin.

3. A semiconductor device according to claim 1, wherein a metal ring is bonded on the front surface of the

base at the exterior of the connecting sections with wires in the wiring films.

4. A semiconductor device according to claim 1, wherein said semiconductor element and said wires are covered with a reinforcement having a downward indented face.

5. A semiconductor device according to any one of claims 1 to 4, wherein the base has vent holes.

6. A method for making a film circuit comprising:
a step of forming wiring films on a metal film for stopping etching as an underlying layer by plating using a mask film, the mask being selectively formed on a front surface of a metal substrate;

a step of forming a base comprising an insulating resin and having electrode-forming holes on the front surface of the metal substrate such that at least parts of the wiring films are partly exposed; and

a step of etching at least the region of the metal substrate, in which the wiring films are formed, from the back surface until the metal film for stopping etching is exposed.

7. A method for making a film circuit according to

claim 6, wherein said metal film for stopping etching is formed by using the mask after said mask is formed and before the wiring films are formed.

8. A method for making a film circuit according to claim 6, wherein

the metal film for stopping etching is deposited on the surface of the metal substrate;

a mask film is selectively formed on the metal film for stopping etching, and the wiring films are formed on the metal film as an underlying layer through the mask film by plating; and

after completing the etching step for exposing the metal film for stopping etching from the back surface at least in the region of the metal substrate in which the wiring films are formed, the metal film for stopping etching is removed.

9. A method for making a semiconductor device using a film circuit according to claim 6, comprising a step of forming external electrodes in the electrode-forming holes and a step of electrically connecting the wiring films and the electrodes of the semiconductor device.

10. A method for making a semiconductor device using a

film circuit according to claim 7, comprising a step of forming external electrodes in the electrode-forming holes and a step of electrically connecting the wiring films and the electrodes of the semiconductor device.

Sub D²

11. An electronic device comprising a semiconductor device comprising: a plurality of wiring films formed on a front surface of a base comprising an insulating resin and having electrode-forming holes, the surfaces of the wiring films and the surface of the base being positioned on the same plane and at least parts of the wiring films overlapping with the electrode-forming holes; a conductive material embedded into the electrode-forming holes to form external electrodes on the back surface, away from the wiring films, of the base; a semiconductor element positioned on said a front surface of the base with an insulating film therebetween, the back surface of the semiconductor element being bonded to said front surface of the base; and wires for bonding the electrodes of the semiconductor element to the corresponding wiring films.

12. An electronic device according to claim 11, wherein said semiconductor element and said wires are sealed with a resin.

add
B2

[illegible]